

SCIENCE & GOVERNMENT REPORT

21st Year of Publication

The Independent Bulletin of Science Policy

Volume XXI, No. 20

P. O. Box 6226A, Washington, D. C. 20015

© December 15, 1991

Pay at the Top Dwarfs Federal Scale

Non-Profit Senior Salaries: SGR's Annual Survey

Here is SGR's Fourth Annual Selective Survey of Non-Profit Senior Salaries, a year-end exercise in fiscal voyeuristics that, by the measure of reader arousal, exceeds all other efforts of this publication at exploring the innards of the scientific community. The data are from the latest submissions of Internal Revenue Service Form 990, which organizations holding tax exemptions under Section 501(c) of the Internal Revenue Code are required to make available for public inspection at their home offices. (Prior to a 1988 amendment to the Code, the tax reports were theoretically available from the IRS, but requests were either ignored or long delayed in fulfillment.) The salaries listed here may be a year or more out of date, because of filing extensions, but an addition of 5-10 percent brings most of them approximately up to current figures.

National Academy of Sciences (NAS). The latest filing of the honorary and advisory Olympus of science, engineering, and medicine is for fiscal 1989, which ended June 30, 1990. Top pay was received by NAS President Frank Press:

Did Dingell Get Baltimore?—P. 4 ***Creative Financing for the SSC—P.6***

\$231,231, plus \$46,430 in benefits. The year before, the comparable amounts for the NAS President were \$222,782 and \$28,440. The tax return also notes that the Academy President "is provided a chauffeur-driven automobile primarily for business purposes. Included in compensation is the value of his personal use of the automobile."

For many years, the Academy owned a presidential residence at the Watergate Apartments for which the chief paid only for "personal use," an NAS spokeswoman told SGR last year. SGR is now advised that the Academy no longer owns the apartment. The tax return contains no reference to presidential housing. Salary and benefits of other senior officials in the Academy complex:

Robert M. White, President, National Academy of Engineering: \$203,135; \$42,029.

Samuel O. Thier, President, Institute of Medicine (who has since moved to the Presidency of Brandeis University): \$212,916; \$33,671.

Philip M. Smith, Executive Officer: \$137,685; \$25,040.

James R. Wright, General Counsel: \$127,857; \$19,363.

David Williams, Chief Financial Officer: \$118,062; \$25,220.

The tax records reveal a nice rate of growth at the

Academy, which exists mainly on government contracts for technical and policy studies. In fiscal 1989, the Academy's budget totaled \$180.5 million, of which federal agencies provided \$146.5 million, a one-year increase of \$18.7 million in federal funds. The rest of the Academy's budget comes from endowment, interest on savings, and non-government grants.

The pay of the Academy's chieftains for science, engineering, and medicine is not munificent by industrial or business standards, but by the pay scales of the government on which the organization thrives, the levels are indeed lofty. The Director of the National Science Foundation and the Director of the White House Office of Science and
(Continued on Page 2)

In Brief

Peace Dividend: \$150 million in intelligence funds have been redeployed for international and language studies at graduate and undergraduate levels. Legislation for the switch was introduced by Senator David Boren (D-Okla.), Chairman of the Senate Select Committee on Intelligence.

Mismanagement but no criminal activity—that's the verdict in the NSF Inspector General's inquiry into a rash of allegations concerning NSF's Division of Science Resources Studies [SGR, July 1: "NSF Wonders Whether It's Got a Scandal Brewing"]. A new Division chief came aboard as the report was being written. With the object of scrutiny identified only as "one of NSF's divisions," the findings are reported in the IG's latest Semiannual Report to the Congress (57 pp., no charge). Single copies from: Office of the Inspector General, NSF, 1800 G St. NW, Room 1241, Washington, DC 20550; attn. Ms. Pettis; tel. 202/357-9458.

Reporting that a self-initiated audit has discovered "occasional errors in allocating costs" over the past six years for its executive offices and center at Woods Hole, Mass., the National Academy of Sciences has refunded \$168,723 to the federal government. These "costs centers," the Academy said, account for \$3 million of the \$42 million allocated to the NAS "indirect cost pool." Observing with interest is Rep. John Dingell, who has asked federal auditors to check the NAS accounts.

Accepting the Award for Support of Science from the Council of Scientific Society Presidents at a reception on December 9th, Chairman George Brown of the House Science, Space and Technology Committee wryly declared: "I can't say this award is entirely undeserved."

... Outpacing the Cost of Living at Hughes Institute

(Continued from Page 1)

Technology Policy are both at Federal Executive Level II, which pays \$125,100.

Howard Hughes Medical Institute. The goliath legacy of the eccentric industrialist, aviator and movie tycoon, the Hughes Institute has rinsed away its shady reputation as a tax-avoidance scheme with a monsoon of cash for legitimate medical research. The mausoleum-like atmosphere at Hughes' headquarters, in Bethesda, Md., masks herculean toil to satisfy the IRS's stern insistence on a hefty payout from an endowment unmatched in the world of philanthropy. According to Hughes' latest tax return, for fiscal 1989, the bundle stood at \$6.5 billion on August 31, 1990, the conclusion of a fiscal year in which Hughes disbursed \$234 million. Demonstrating that it is better to give than receive, senior staff salaries assisted the requisite outward flow. Now in rented office space in a soulless tower block, Hughes is spending \$49 million for a seven-building made-to-order headquarters and conference center on 22.5 prime acres in Bethesda. Modesty prevails, however: No swimming pool and only one tennis court. The move-in date is next November.

In fiscal 1989, the chief of the Hughes enterprise, Purnell W. Choppin, President and Chief Executive Officer, kept ahead of the cost of living, receiving \$370,000 in salary, an increase of \$30,000 from the previous year. His benefits totaled \$85,100.

However, reflecting a proper respect for money, the top pay at Hughes went not to the top executive but to the man who minds the endowment, Graham O. Harrison, Vice President and Chief Investment Officer, who received \$410,000, plus \$88,391 in benefits. Lillian Blucher, Managing Director for Investments, received \$260,500 in pay and \$49,544 in benefits.

W. Maxwell Cowan, Vice President and Chief Scientific Officer, was paid \$260,000, plus \$58,399 in benefits.

Joseph Perpich, the Vice President in charge of spending an extra \$500 million during 1987-97 to keep the IRS hounds at bay, was paid \$195,000 and \$43,163 in benefits.

Other executive salaries and benefits at Hughes:

William T. Quillen, Vice President, Counsel, and Secretary: \$238,000; \$53,954.

Robert C. White, Vice President, Chief Financial Officer, and Acting Treasurer: \$260,000; \$63,921.

Mark W. Smith, Controller: \$130,000; \$30,732.

Hughes, unlike other scientific philanthropies, does not merely give grants but puts superstar academic scientists on its payroll on a permanent basis. The tax return lists four researchers as the top salary recipients outside of the headquarters staff:

Philip Leder, Professor of Genetics, Harvard Medical School: \$215,309, plus \$49,676 in benefits.

Bernardo Nadal-Ginard, Professor of Cellular and Molecular Physiology, Harvard Medical School: \$198,000;

\$41,374.

Eric R. Kandel, Professor of Physiology and Psychiatry, Columbia University College of Physicians and Surgeons: \$193,556; \$45,815.

C. Thomas Caskey, Professor in the Institute for Molecular Genetics, Baylor College of Medicine: \$190,000; \$46,168.

Association of American Medical Colleges (AAMC). According to its 1989 tax return (for the fiscal year ending June 30, 1990), the AAMC, Washington lobby and admissions-test administrator for the nation's medical schools, set a precedent on the non-profit circuit: no increases in pay for its executives. AAMC President Robert G. Petersdorf is listed at \$268,000, unchanged from the previous year's return. His most recently reported benefits, \$26,800, were up only a trifle. However, the Petersdorf compensation package is still one of the loftiest in business.

The AAMC presidential post is accompanied by a residence which, according to previous AAMC tax returns, the President is "required" to occupy to "carry out the administrative, ceremonial and social duties of the office." In viewing the latest available return for the AAMC, SGR found no reference to housing arrangements for medical education's envoy to the nation's capital. SGR's inquiry to the AAMC brought the reply that information about housing is not required by the IRS and therefore the AAMC did not feel obliged to discuss the matter. The AAMC spokeswoman called back later to say that the residence is reported "on a new form," and that the provision of housing for the AAMC President is unchanged.

SGR pays dearly for pursuing the scientific community's right to know. Since inaugurating these IRS 990 reports four years ago, SGR has been stricken from the invitation list for the AAMC's crammed and boozy holiday festivity for the Washington biomedical community.

Other salaries and benefits reported by the AAMC, all unchanged from figures reported for the previous year:

John J. Sherman, Executive Vice President: \$178,000; \$17,800.

Richard Knapp, Senior Vice President: \$132,000; \$13,000.

(Continued on Page 3)

© 1991, Science & Government Report, Inc.

Editor and Publisher

Daniel S. Greenberg

European Correspondent

Francois Segurier (Paris)

Associate Publisher

Wanda J. Reif

Circulation Manager

Glen D. Grant

Independently published by Science & Government Report, Inc., twice monthly, except once each in January, July, August, and September. Annual subscriptions: Institutions, \$358.00 (two years, \$610.00). Bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. NW, Washington, DC 20015. Tel. (202) 244-4135. For subscription service: PO Box 6226A, Washington, DC 20015. Tel. 1-800-522-1970; in Washington, DC 785-5054. Reproduction without permission is prohibited. SGR is available on University Microfilms International. Claims for missing back issues will be filled without charge if made within six weeks of publication date. ISSN 0048-9581.

... \$379,619 for Pharmaceutical Association Head

(Continued from Page 2)

August Swanson, Vice President: \$125,000; \$12,500.

Louis Kettel, Vice President: \$120,000; \$12,000.

James Bentley, Vice President: \$120,000; \$12,000.

Thomas Malone, Vice President: \$120,000; \$12,000.

American Association for the Advancement of Science (AAAS). The AAAS' most recent tax return, for calendar year 1990, was filed last October. It reports a salary of \$158,106, plus benefits of \$29,300, for the top hired hand, Executive Director Richard Nicholson, who moved to the job from NSF in May 1989. For seven months of that year, he was paid \$102,268.

Salary Survey Reprints Available

Reprints of the four annual salary surveys published by SGR since 1988 are available for \$7.50 for the lot, postage included for domestic orders; add \$2 for foreign orders. Please include payment. Address: SGR, P.O. Box 6226 Northwest Station, Washington, DC 20015.

In general, the AAAS has tended toward the middling ranks of pay and has been sluggish with increases for its staff, though the Association has emerged from the fiscal doldrums since Nicholson was appointed. In 1990, total revenues reached \$37 million, a one-year increase of about \$6 million.

After Nicholson, the five highest salaries, plus benefits: Daniel E. Koshland Jr., editor of *Science*, the breadwinner property of the AAAS, who was paid \$106,853, virtually unchanged from 1989. The 1990 return lists \$8814 in benefits for Koshland; none were reported for him in 1989. The tax return notes that Koshland, who holds a faculty position and NIH grants at UC Berkeley, is employed by the AAAS "less than full time." In the 1989 return, Koshland was listed for a 20-hour work week at *Science*.

Carl B. Amthor, Chief Financial Officer, \$107,713; \$23,625. In 1989, his salary was reported at \$91,535.

F. James Rutherford, Education Officer, \$96,650; \$21,944. The previous salary figure was \$92,859.

William R. Engelman, Head of Administration, \$89,759; \$14,173.

Arthur Herschman, Meeting Director, \$80,188; \$17,200.

Pharmaceutical Manufacturers Association (PMA). A newcomer on the SGR survey, the big and brassy lobby of the research-oriented pharmaceutical firms pays its top man on a scale befitting a rich industry with innumerable regulatory problems. The Association's 1990 return for the fiscal year ending last June 30 was filed in November. It reports a salary of \$379,619.23, plus \$18,152 in benefits for PMA President Gerald J. Mossinghoff. The only other official listed is Bruce J. Brennan, General Counsel: salary \$189,221.76, plus \$17,799.54 in benefits.

Aerospace Industries Association (AIA). The trade as-

sociation of the aerospace industry, the AIA is headed by former Congressman Don Fuqua, who, in the Washington tradition of the revolving door, came to the AIA presidency, in 1986, directly from the chairmanship of what is now called the House Science, Space, and Technology Committee—which legislates for NASA. The latest AIA return, for calendar 1990, reports a salary of \$266,425 for Fuqua, a one-year increase of \$29,410. He also received benefits of \$18,916. The only other salary reported on the AIA tax return was for George Copsey, Secretary Treasurer, who received \$72,696, plus \$9372 in benefits.

American Chemical Society (ACS). With revenues of \$206 million in 1990, mainly from its ownership of *Chemical Abstracts* and other basic literature in the field, the ACS is fiscal giant among professional societies. It pays well, but not extraordinarily well. The latest return, for calendar year 1990, filed in November, reports a salary of \$187,100, plus \$11,827 in benefits, for John K. Crum, ACS Executive Director. In the previous year Crum was paid \$176,785; benefits were reported at \$34,596.

Justin Collat, ACS Secretary, received \$112,000 in salary, an increase of \$5000, plus \$7080 in benefits, compared with \$19,866 in benefits in the previous year.

Brian A. Bernstein, Treasurer, received \$98,299, plus \$6214 in benefits. The figures for the previous year: \$93,154, and \$15,471.

Listed as the five highest paid employees, apart from officers of the ACS, were the following division directors: Ronald W. Wigginton: \$150,298; \$9501.

Robert Marks: \$132,362; \$8367.

Nick A. Farmer: \$117,154; \$7406.

D.H. Michael Bowen: \$115,905; \$6826.

James V. Seals Jr.: \$107,981; \$7327.

American Psychological Association (APA). For calendar year 1990, the APA tax return, filed in July 1991, reports a salary of \$248,765 for Raymond D. Fowler, the APA Chief Executive Officer. Appointed to the post in mid-1989, he was paid \$134,930 in that year. No benefits were listed for either year. An APA financial officer told SGR that Fowler "took cash in lieu of benefits."

The same applies, he said, to Bryant L. Welch, APA Executive Officer, for whom a salary of \$218,513 and \$3269 in benefits are reported on the latest return. For the previous year, the APA reported that Welch received \$150,930 in salary, and \$3120 in benefits.

Other top salaries and benefits reported by the APA:

Gary R. Vandebos, Executive Director: \$125,489; \$3269.

James M. Jones, Executive Director: \$108,078; \$3269.

Lawrence M. Honaker: Deputy Chief Executive Officer, \$103,600; no benefits.

Charles L. McKay: \$134,960; \$3269.

Association of American Universities (AAU). The
(Continued on Page 4)

Baltimore Steps Down from Rockefeller Presidency

"Dingell Gets Baltimore," the title of a fulminating *Wall Street Journal* editorial on December 4, summarizes a widespread interpretation of Nobel laureate David Baltimore's resignation from the presidency of Rockefeller University.

In reality, however, Baltimore got Baltimore. John Dingell, the sulfurous Congressman from Michigan, merely kept the case alive and played out rope for the victim.

Baltimore brought himself down by committing sins for which science begrudges amnesty: refusal to acknowledge error and insensitivity to a fledgling member of the scientific profession. He finally fell under the scorn of colleagues who could not abide his arrogance and intransigence in what should have been an easily settled minor scientific controversy: a long-running dispute over the authenticity of a co-author's contribution to a research paper.

Why Baltimore behaved as he did, defending his colleague long after she was exposed as indefensible, remains a mystery explainable, perhaps, by hubris, poor advice, or miscalculation. But that he behaved badly is indisputable.

Baltimore's performance provoked fellow scientists to rare public expressions of disdain that diminished his stature at Rockefeller. His resignation from the elite institution was preceded by the departures of grumbling, disaffected staff to other institutions, with indications of more resignations to come.

David Rockefeller tried to support Baltimore with props for which the Rockefellers are best known—money, \$20 million for the University's endowment, accompanied by a strong public expression of support for President Baltimore.

Salary Survey

(Continued from Page 3)

Washington lobby for big-league academic research, the AAU projects a presence that belies its small size (56 American, 2 Canadian universities) and piddling revenues (\$2.6 million). The latest AAU return is for 1989, covering the fiscal year that ended September 30, 1990. Filed last January, it reports a salary of \$151,000 and \$15,000 in benefits for AAU President Robert Rosenzweig. The tax return states that "The President of the Association, as a condition of his position, resides in an Association-owned house . . ."—a comfortable pad on the "Embassy Row" section of Massachusetts Ave. NW, not far from the AAU's DuPont Circle office. "House expenses" are listed at \$25,446.

Also listed in the AAU tax return are John C. Crowley, Vice President, who has since become head of MIT's Washington office. His AAU salary for the year ending September 30, 1990, was reported to be \$108,000, plus \$10,800 in benefits.

Carol Scheman, an AAU Administrator who is now with the Food and Drug Administration, received \$87,000 in salary and \$8700 in benefits.

Money, however, could not heal this problem. Never at issue was Baltimore's scientific prowess or administrative skill. The same cannot be said of his judgment and techniques for responding to the rising controversy about the disputed paper.

An illustrious, even revered, figure in the world of science, Baltimore decisively bested Congressman John Dingell in a dramatic hearing-room confrontation in May 1989 [SGR May 15, 1989: "Baltimore Wins PR Battle, But Key Issues Remain"]. The issue before Dingell was whether NIH had performed responsibly in handling an allegation of scientific misconduct that had been brought against Thereza Imanishi-Kari, then of MIT, now at Tufts.

She and Baltimore, who was then head of the MIT-affiliated Whitehead Institute, were the principal co-authors of the disputed paper, published in *Cell* in April 1986. A postdoctoral fellow in Imanishi-Kari's laboratory, Margot O'Toole, had raised questions about the validity of the data Imanishi-Kari had provided for the paper. On the basis of perfunctory inquiries, MIT and Tufts dismissed O'Toole's allegations as baseless—and she was soon an unemployed scientist.

The plain evidence was that NIH had not behaved responsibly in dealing with O'Toole's allegations. Under Dingell's glare, NIH had conceded as much by canceling its planned appointment of two close colleagues of Baltimore to a panel assigned to investigate the case. But Baltimore, counseled by a hired public-relations team, successfully obscured the essentials of the case with a melodramatic

(Continued on Page 5)

John Vaughn, Director of Public Affairs, \$82,000; \$8200.
Peter Smith, Administrator, \$70,000; \$7000.

Federation of American Societies for Experimental Biology (FASEB). A coalition of societies that claims the role of Washington representative of the bench scientist, FASEB is another newcomer to the SGR survey. Its Executive Director and Secretary, Michael J. Jackson, started work there in September 1990, and therefore only a fraction of his annual compensation is covered in the latest return, for calendar 1990, filed last March. For the September-December 1990 period, Jackson's salary is listed at \$48,334, plus \$6516 in benefits.

The five highest paid employees (salary plus benefits) other than FASEB officers were reported as follows:

Garcin Kaganovich, Director, Office of Public Affairs: \$101,502; \$15,585.

John R. Rice, Comptroller: \$100,142; \$16,092.

Kenneth D. Fisher, Director, Life Sciences Research Office: \$83,352; \$10,911.

Lewis I. Gidez, Director, Office of Publications: \$79,941; \$12,835.

Geri K. Goodenough, Director, Office of Scientific Meetings: \$62,775 \$10,442.

... "Only Question Is Whether Anyone Goes to Jail"

(Continued from Page 4)

hearing-room sermon on scientific freedom—which was not the issue. He also made a grandstand appeal for science to be granted freedom to err as the price of scientific progress. Again, that was not the issue in this matter. Deliberate fraud by his colleague, rather than excusable error, was the issue, but Baltimore adamantly insisted that scientific freedom was at stake.

"I must tell you, Mr. Chairman," he lectured Dingell, "I am very troubled about how this situation got so out of hand. I have a real concern that American science can easily become the victim of this kind of government inquiry." Politics has no business intruding into science, Baltimore proclaimed, thus winning applause in the hearing room and in the battle for favorable newspaper column inches.

However, O'Toole persisted and was vindicated when investigators at the National Institutes of Health, continually prodded by Dingell, concluded that Imanishi-Kari was indeed guilty of fabricating data. The finding was in large part based on Secret Service paper and ink analysis that found that Imanishi-Kari's records of experiments for the disputed paper were produced after the paper was published.

Throughout the investigation, however, Baltimore defended the validity of the co-authored research report and successfully orchestrated a nationwide letter-writing campaign by scientists to depict Dingell as an anti-science McCarthyite.

Last spring, a leaked draft of the NIH report—it is still not in final form—flatly accused Imanishi-Kari of fabricating data, hailed O'Toole as "heroic" and chastised Baltimore for defending the paper long after "evidence mounted that serious problems existed" in its essential data. Baltimore's behavior in the five-year-long controversy was described in the NIH report as "extraordinary," "deeply troubling" and "startling."

Of O'Toole, the draft report stated: "She deserves the approbation and gratitude of the scientific community for her courage and her dedication to the belief that truth in science matters."

Baltimore responded with a carefully worded mea culpa in which he expressed "tremendous respect for O'Toole, personally and as a scientist," adding that "I am shocked and saddened by the revelations of possible alteration and fabrication of data." He also agreed to retract the disputed paper.

But several barons of the science establishment were willing to go on record as having had their fill of Dr. Baltimore, among them Paul Doty, emeritus professor of biochemistry at Harvard. Writing in *Nature* last July 18, Doty said that "the apology, although welcome, does not erase from the record the behavior that occurred and was defended over five years and omits mention of many other actions."

Doty then presented a bill of particulars against Balti-

more: "He (1) failed to examine critically the quality and sufficiency of the data before publication; (2) failed to examine the data and report the possibility of error after serious criticisms were made; (3) instead, organized an attack on his critics and discouraged publication of their views; and (4) did not subject the conclusions to further tests or check the reproducibility of what had been reported in a timely manner."

An editorial in *Nature* on October 10 faulted Baltimore for failing to pay serious attention to O'Toole's objections, and said, "The plain truth is that the authors of all published research reports have a personal responsibility for their aftercare. They, after all, are best placed to carry out the meticulous examination of the original data when questions are asked about them and, when necessary, to design and carry out replicate experiments."

Responding to Doty (*Nature*, September 5), Baltimore swiftly reversed course by virtually retracting the retraction of the *Cell* paper, and cast doubt on the reliability of O'Toole, for whom he had recently expressed "tremendous respect... personally and as a scientist." Doty's allegations against the *Cell* paper, Baltimore wrote, are "based on mainly unsubstantiated, and often refuted, allegations of one participant in events five years old." The paper itself, he said, was produced "with rigor and criticality."

Earlier in the bitter exchanges of letters, Professor John Cairns of the Harvard School of Public Health addressed Baltimore's behavior and the discredited paper more bluntly, in *Nature* on July 11: "Nothing now is likely to stop the affair from progressing to its final disastrous conclusion, and I do not see how the authors of the paper can escape public censure, at the very least." Cairns concluded: "About the only question remaining is whether anyone will actually go to jail."

The first step in answering that question is in the hands of a federal grand jury in Baltimore which has heard testimony from O'Toole and at least one other witness.

Meanwhile, the so-called Baltimore case remains in limbo at NIH, following Director Bernadine Healy's severe criticisms of the style of operation of the NIH Office of Scientific Integrity [SGI, August 1: "NIH Director Defends Curbs on Misconduct Office"]. The leaked draft report on the case remains merely a draft report. The principal investigator and author of the report, Suzanne Hadley, angrily resigned from the case after Director Healy ordered an examination of her telephone logs. The NIH head, it seems, had been informed that Hadley had frequently spoken with whistle-blower O'Toole during the course of the investigation. Indeed she had, Hadley acknowledged, but so it goes, she pointed out, with complainants in all investigations.

Five years after the case began, it still isn't over. But at this stage, it must be observed that Dingell didn't get Baltimore. Baltimore got Baltimore.—DSG

Supercollider Backers Turning to Fiscal Alchemy

Reports of wondrous new schemes in creative finance are wafting from the Department of Energy as pessimism there grows about the possibility of other nations helping with the costs of the Superconducting Super Collider (SSC).

At least \$1.7 billion is needed from abroad to fulfill the White House's assurances that the SSC will be neither unduly burdensome nor bite into the budgets of other fields of physics. However, Japan, the leading prospect for a major handout, remains unmoved, despite a strong appeal in October by D. Allan Bromley, the White House Science Adviser, and last week by DOE Secretary Watkins. President Bush is to take up the cause during his New Year's visit to Japan.

Meanwhile, DOE's strategists have not been idle, SGR hears from informed sources. Lacking cash commitments, DOE is exploring fiscal alchemy to create the appearance of foreign aid, not only from Japan, but from the ex-Soviet Union, South Korea, and China as well.

To accomplish this feat, DOE would purchase major components from these nations. The prices abroad would go into the books as lower than those to be found in the US, though whether they actually are lower than domestic prices is another matter. The differences in cost would go into the SSC's accounts as foreign "contributions."

Under this scheme, Japan would provide a whole high-energy booster, while Korea would provide the magnets for a medium-energy booster and the Russians for a low-energy booster. China would get the job of drawing copper wire.

Initially lulled by assurances that the SSC would be built without straining DOE's budget for basic research, the various tribes of physics have now awakened to the menace that they tolerated. Last January, the Council of the American Physical Society issued a cautionary statement about the SSC. Noting that "A vigorous research program is comprised of both a broad base and major research facilities, such as the Superconducting Super Collider," the statement counseled that "The SSC should be built in a timely fashion, but the funding required to achieve this must not be at the expense of the broadly based scientific research program of the United States."

The Council issued a statement substantially different in content and tone in November, noting that a DOE advisory committee (Chaired by Charles Townes) had been "asked to recommend a program based on a 10 percent reduction in current dollars for FY'93, and severe reductions in subsequent years." The statement added: "The Council recognizes the severe fiscal constraints that confront the nation, but is dismayed that broadly based research is being reduced when the need to invest in our future has never been greater."

The windup of the statement was a reaffirmation for the SSC, but, again, "not at the expense of the broadly based scientific research program of the United States."

Even the physicists must now realize that proceeding with the SSC will incur that expense.

Job Changes & Appointments

Jane E. Henney, Vice Chancellor for Health Programs and Policy at the University of Kansas Medical Center, has been appointed Deputy Commissioner for Operations at the Food and Drug Administration, one of five new senior posts created by FDA Commissioner David Kessler. Henney served from 1980-85 as Deputy Director of the National Cancer Institute.

James J. Duderstadt, President of the University of Michigan, has been elected Chairman of the National Science Board, the policymaking body of the National Science Foundation. A member of the Board since 1985, he succeeds **Mary L. Good**, who resigned to become a member of the President's Council of Advisors on Science and Technology. Good, Vice President for Technology at Allied-Signal, Inc., had chaired the Board since 1988.

Also on the National Science Board: **Ian M. Ross**, President Emeritus of AT&T Bell Laboratories, has been confirmed by the Senate to complete the term, ending next May, of **Howard A. Schneiderman**, a Senior Vice President of Monsanto Co., who died last December. **James B. Holderman**, who resigned from the presidency of the University of South Carolina last year after pleading guilty to taking a cut of a donation to the University, has resigned from the Science Board, where he once chaired the Committee on

Europe in 1992. The White House, which makes appointments to the Board, tends to torpor in handling that chore, and has not acknowledged the resignation of Holderman, who formerly was hailed for seeking instant excellence for the University. In any case, NSB staff says he's gone. Sentenced to 500 hours of community service last May following a plea of no contest to tax evasion, Holderman resigned a tenured professorship at USC this month after he was accused of sexual advances to interns at the school.

Charles R. Schuster has resigned as Director of the National Institute on Drug Abuse, a post he held since 1985, and will become a Senior Scientist at NIDA's Addiction Research Center, in Baltimore.

Richard F. Celeste, former Governor of Ohio, has been named Chairman of the Government-University-Industry Roundtable at the National Academy of Sciences, succeeding **James Ebert**, Director of the Chesapeake Bay Institute, of Johns Hopkins University. As Governor, Celeste initiated and strongly supported state efforts to promote economic development through academic-industrial collaboration, an activity high on the agenda of the Academy Roundtable.

SGR Holiday Schedule

The next issue of *Science & Government Report* will be published January 15, 1992.

More in Print: Nuclear Safety, Miniaturization, Etc.

(Continued from Page 8)

(GAO), a report giving poor grades to four federal programs intended to boost the technological prowess of firms with fewer than 500 employees—which GAO says account for 98 percent of the nation's 358,000 manufacturers. The programs, administered by the Small Business Administration and the National Institute of Standards and Technology (NIST), reached only a small number of firms directly and stimulated technical-assistance efforts by only seven states. The GAO says that the technologies dished up from federal labs "are not practical for most small manufacturers because these technologies generally are too expensive, untested, and too complex." Congress, it suggests, "may wish to refocus the emphasis of such programs from transferring advanced laboratory-based technologies to transferring proven off-the-shelf technologies."

Also from GAO: *Nuclear Power Safety: Chernobyl Accident Prompted Worldwide Actions but Further Efforts Needed* (GAO/NSIAD-92-28), in response to a request by Senator John Glenn, Chairman of the Committee on Governmental Affairs, for a review of post-Chernobyl efforts to improve nuclear safety, the GAO reports a few positive developments among member states of the International Atomic Energy Agency (IAEA). But, the report notes, "No agreement exists among nuclear power countries to make compliance with any nuclear safety standards or principles mandatory." Among those balking at international standards, the GAO says, is the US, which believes that "mandatory compliance infringes on national sovereignty . . ." Of the many scary power reactors operating in the ex-Soviet Union and the old eastern bloc, the GAO notes that IAEA safety teams have examined only 13 of 61 and that "little follow up is made to assess whether corrective actions are taken on IAEA findings and recommendations."

Order from: USGAO, PO Box 6015, Gaithersburg, Md. 20877; tel. 202/275-6241.

Miniaturization Technologies (GPO Stock No. 052-003-01267-7; 48 pp., \$3.25, add 25 percent for international orders), by the Congressional Office of Technology Assessment (OTA), says the US leads the world in miniaturizing silicon electronics, micro-mechanical systems, and other ventures into the minuscule, but foreign competition is gaining strength. For the shortterm, OTA warns, the danger "is that US companies will lag behind other nations in implementing advanced technologies, especially when new technology is driven by a product or market dominated by another nation's industry." Addressing the potential for technologies at the molecular level, OTA notes concerns about "potentially dangerous applications such as weapons more powerful than nuclear bombs, or machines that replicate uncontrollably, reducing the earth to a 'gray goo.'" OTA says, "The development of the first protoassembler might be an appropriate milestone to reconsider government

regulatory involvement."

Order from: USGPO, Superintendent of Documents, Washington, DC 20402-9325; tel. 202/783-3238.

International Research Centers Directory: 1992-93 (1126 pp., \$375), sixth edition, lists 7185 research organizations in over 150 countries, excluding the US. Spanning virtually all scientific, medical, and technical fields, entries are for government, academic, private, and international laboratories, research centers, administrative units, etc., and include names of key officials, addresses, telecommunications numbers, budgets, summaries of major activities, publications, and so forth. Coverage of the US and Canada is in *Research Centers Directory: 1992* (two volumes, totaling 2436 pp., \$420) 16th edition, which lists 12,500 research organizations.

Order from: Gale Research, Inc., PO Box 33477, Detroit, Michigan, 48232-9863; tel. 1-800-877-4253.

Research Services Facilities: National Institute of Standards and Technology (88 pp., no charge), describes research and testing facilities available at NIST for use by industrial firms. An introductory note by NIST Director John W. Lyons says industry should not fear that collaborative efforts with NIST might be pawed over by competitors using the Freedom of Information Act (FOIA) or that research co-owned by the government is available to all comers. Lyons notes that the Federal Technology Transfer Act of 1986 "protects proprietary information provided by a cooperative research and development partner from FOIA requests. It also allows federal laboratories to grant exclusive licenses to cooperative research partners for the intellectual property developed during a given project."

Order from: NIST, Public Affairs Division, A903 Administration Building, Gaithersburg, Md. 20899; tel. 301/975-2762.

To Order or Renew

Science & Government Report
Northwest Station, Box 6226A
Washington, D.C. 20015

- ☐ Renew my subscription; ☐ Check enclosed
☐ Enter my subscription; ☐ Please Bill

Institutional subscribers: one year, \$358.00 ☐;
two years, \$610.00 ☐

(Foreign airmail, \$35.00 per year; foreign surface \$15.00 per year additional.)

Name

Address

Zip

Toll-Free Subscription Service: 1-800-522-1970;
In Wash., D.C.: 785-5054

In Print: Academic Science, R&D Funding, Energy

The publications listed are obtainable as indicated—not from SGR.

Fateful Choices: The Future of the US Academic Research Enterprise (71 pp., no charge), "discussion paper," prepared by a group chaired by former NSF Director Erich Bloch, for a conference held December 9-10 at the National Academy of Sciences by the Government-University-Industry Research Roundtable, an offshoot of the Academy. The paper reflects the high-vacuum prose tradition, e.g., "During the next decade, the size of the US academic research enterprise—the number of academic departments and research personnel—may grow, remain in steady state, or become smaller." The paper is packed with exhortations for priority-making within and among disciplines and institutions, thrifty use of funds, and the development of planning mechanisms. At the outset of the conference, Bloch noted that the paper was "the culmination of a four-year study," adding that he had "no answer as to why it took so long." The Roundtable is basically a structured bull session of representatives from the three sectors in its title, with the underlying goal of rendering government and industry more sympathetic to academe. The Roundtable says copies of the discussion paper will be available in February.

Order from: National Academy of Sciences, Government-University-Industry Research Roundtable, NAS-340, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 202/334-3486.

Information 2000: Library and Information Services for the 21st Century (GPO Stock No. 040-0000-00564-1; 78 pp., \$6), Summary Report listing the 95 recommendations produced last July by the White House Conference on Library and Information Services.

Order from: USGPO, Superintendent of Documents, Washington, DC 20402-9325; tel. 202/783-3238.

Selected Data on Federal R&D Funding by Budget Function: Fiscal Years 1990-92 (NSF 91-319; 30 pp., no charge), tables showing how the federal government spends its R&D money, by purpose and agency, with much of the data tracked from 1955 through the Administration's proposals for the present fiscal year. Included are comparisons of military and civilian R&D spending and funding in constant and current dollars.

Order from: Division of Science Resources Studies, National Science Foundation, Washington, DC 20550; tel. 202/634-4634.

Renewable Energy: A New National Commitment (IB90110; 18 pp., no charge), from the Science Policy Research Division of the Congressional Research Service, a budgetary and legislative review showing that spending on renewable energy R&D (solar, geothermal, wind, etc.) by the Department of Energy increased slightly during the past

Gloom on Breast Cancer

Breast Cancer, 1971-91: Prevention, Treatment, and Research (GAO/PEMD-92-12; 58 pp., no charge), from the General Accounting Office (GAO), on the occasion of the 20th anniversary of the "war on cancer," a gloomy assessment, prepared at the request of Rep. Ted Weiss (D-NY), Chairman of the House Government Operations Subcommittee on Human Resources and Intergovernmental Relations, which heard testimony on the report on December 11. The GAO witnesses acknowledged uncertainties in interpreting the statistical data. But, with 1971-91 incidence of breast cancer up from 82 to 110 cases per 100,000 women, they concluded that "there has been no progress in preventing the disease," and noted that a 1989 GAO study "found no survival improvement among a select group of breast cancer patients despite widespread use of chemotherapy." The crucial lack, the report stated, is "fundamental knowledge about the etiology of breast cancer." Also testifying were Bernadine Healy, Director of the National Institutes of Health, and Samuel Broder, Director of the National Cancer Institute. They responded that breast cancer is a tough scientific problem and the NIH system is working harder and spending more than ever to prevent and cure it. Another witness, Devra Lee Davis, an apostle of prevention who holds a fellowship at the National Academy of Sciences, argued that "Prevention can be successful before mechanisms are understood." The GAO report will be available in a few weeks. When the text of testimony at the hearing is off the press—"in a month or two"—notice will be published here.

Order the GAO report from: USGAO, PO Box 6015, Gaithersburg, Md. 20877; tel. 202/275-6241.

couple of years, but is still a sliver of what it was in the golden days of the Carter Administration. The report, by Fred J. Sissine, notes that in constant dollars, funding plummeted from \$875 million in fiscal 1979 to \$84 million in FY1990. For the present fiscal year, DOE requested \$222 million (in today's dollars), the White House whittled it to \$164 million, and Congress voted \$203 million. The report contains tables of spending on renewables from 1974-91 and summaries of related legislation.

Order from: Science Policy Research Division, Congressional Research Service, Library of Congress, Madison Building, Washington, DC 20540; attn. Ms. Hall; 202/707-6030.

Technology Transfer: Federal Efforts to Enhance the Competitiveness of Small Manufacturers (GAO/RCED-92-30; 46 pp., no charge), by the General Accounting Office

(Continued on Page 7)

